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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,476	12/10/2003	Ichiro Kataoka	03500.017766	5423

5514 7590 07/09/2007
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

FICK, ANTHONY D

ART UNIT	PAPER NUMBER
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1753

MAIL DATE	DELIVERY MODE
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07/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/731,476

Applicant(s)

KATAOKA ET AL.

Examiner

Anthony Fick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/1/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 through 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Plessing et al. (U.S. 6,369,316).

Plessing discloses a photovoltaic module and method of producing the same.

The module is shown in figure 1 with the method in figure 2.

Regarding claim 1, Plessing shows the method of producing in figure 2. The method comprises the steps of mounting the body to be laminated, 1, on a tabular member, 15; carrying the body to be laminated along with the tabular member onto the mounting board, 21 (belt 16 does the carrying); heat-bonding the body to be laminated by pressing using the pressing means, 17 including 18, 19 and 20; carrying out the body to be laminated along with the tabular member from the mounting board after parting the pressing means from the body to be laminated (16 carries out); and separating the body to be laminated from the tabular member (separation section 27, see column 6, lines 45-50).

Regarding claims 2 and 3, Plessing discloses the use of release sheets, or separating films between the module and the tabular member (column 6, lines 15-18). It is the position of the examiner that the separating films and tabular member do not have perfectly flat surfaces down to the atomic level and thus the surfaces have some measure of irregularity or an irregular form on the surfaces as required in the claims. As applicant has not defined the specificities of these irregular forms, the reference is deemed to be anticipatory for the claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plessing as applied to claims 1 through 3 above.

The disclosure of Plessing is as stated above for claims 1 through 3.

The difference between Plessing and claim 4 is the requirement of a specific mounting board temperature.

The choice of specific lamination temperature is dependent on the specific application i.e. the specific lamination system, the item to be laminated, and optimization of the lamination process. It would be obvious to one skilled in the art to make such a determination of operating temperature based on the specific application/optimization. Absent any unexpected results, the choice of the specific temperature as within the claim would be obvious for the method of Plessing.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plessing as applied to claims 1 through 3 above, and further in view of Yamada et al. (U.S. 6,127,622).

The disclosure of Plessing is as stated above for claims 1 through 3.

The difference between Plessing and claim 5 is the requirement of a specific organic peroxide crosslinking agent.

Yamada teaches a laminated solar cell module as shown in figure 5. Yamada teaches the use of an encapsulating foam made of EVA for example (column 7, paragraph 4) and a crosslinking agent for the encapsulating foam made of an organic peroxide that has a 1-hour half-life temperature of between 100 and 170 °C (column 8, last paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the crosslinking agent of Yamada within the method of Plessing because the crosslinking agent improves the heat resistance and bond strength of the photovoltaic module (Yamada column 8, paragraph 7). It would have been further obvious to one of ordinary skill in the art at the time the invention was made to choose the specific half-life temperature of the claim because Yamada teaches that the crosslinking agent can have a 1-hour half-life temperature range that includes the claimed range. Absent any unexpected results, the selection of this portion of the range would be obvious for the combination. Because Yamada and Plessing are concerned with solar cell modules, one would have a reasonable expectation of success from the combination. Thus the combination meets the claim.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plessing as applied to claims 1 through 3 above, and further in view of Chikaki et al. (U.S. 6,149,757).

The disclosure of Plessing is as stated above for claims 1 through 3.

The difference between Plessing and claim 6 is the requirement of cooling the pressing means.

Chikaki teaches a laminating apparatus as shown in figure 1. The apparatus includes a heating stage, 10, that can include a water cooled pipe, a cooling means (column 4, lines 44-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the configuration of the heating stage, including the water

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cooled pipe, of Chikaki within the method of Plessing because the heater of Chikaki accurately controls the heating temperature by the inclusion of the water cooled pipe (Chikaki column 4, lines 44-48). In the method of Plessing, the heating plate, 21, along with parts 19, 20 and 18 all comprise the pressing means as it is their combined forces that press on the laminated body. Therefore, the use of a water cooled pipe within the heating plate, 21, of Plessing cools the pressing means by cooling means as required by the claim. Because Plessing and Chikaki are concerned with laminating solar modules, one would have a reasonable expectation of success from the combination. Thus the combination meets the claim.

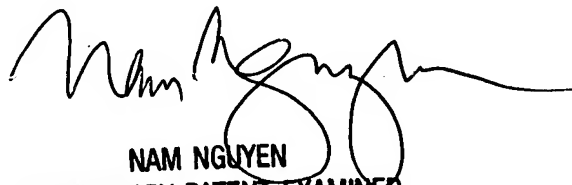
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Fick whose telephone number is (571) 272-6393. The examiner can normally be reached on Monday - Friday 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Fick *ADF*
AU 1753
July 3, 2007


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